BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Subsidiary Diploma in Applied Science Pearson BTEC International Level 3 Foundation Diploma in Applied Science Pearson BTEC International Level 3 Diploma in Applied Science Pearson BTEC International Level 3 Diploma in Biomedical Science Pearson BTEC International Level 3 Diploma in Environmental Science Pearson BTEC International Level 3 Extended Diploma in Applied Science Pearson BTEC International Level 3 Extended Diploma in Biomedical Science Pearson BTEC International Level 3 Extended Diploma in Environmental Science
Unit number and title	**Unit 15: Diseases and Infections**
Learning aim(s)	**D:** Understand how the human body responds to diseases and infections
Assignment title	**Body defences**
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	You are completing a clinical work experience placement where you are shadowing the work of a healthcare science team within their immunology department. The science of clinical immunology is a fast developing area and the immunology department wishes to promote the vocational opportunities available in this field. Your role is to prepare information leaflets and posters relating to human immune defences which will be used as part of the student induction programme.

Task	The human body is continually exposed to pathogens but is generally successful in resisting infection because the immune system constantly works to defend the body against the invasion of pathogenic organisms. The immune system is composed of two major subdivisions, the innate, or **non-specific** immune system and the adaptive, or **specific** immune system. • Produce an illustrated report that **evaluates** the relevance, significance, advantages and disadvantages, strengths and weaknesses of the humoral and cell-mediated immune responses. For the humoral response, you must include the action of B-lymphocytes, memory cells and T-cells, and the role of antibodies and antigens to a named pathogen. For the cell-mediated response, you must include the response to invasion of a named pathogen. You must detail the significance of the speed and specificity of the response in relation to the defence process and progression of the disease in the body.

	• **Compare** the specific and non-specific defence mechanisms in terms of the specificity and speed of their response to infection. Why is it beneficial to have both types of response? • Include a detailed **explanation** of how the various components of the specific and non-specific immune system work to protect the body from pathogens.
Checklist of evidence required	An illustrated report that includes: • A section evaluating the cell-mediated and humoral immune responses. • A section comparing the roles of specific and non-specific immune responses. • An explanation of how the various components of the specific and non-specific immune defences work to protect the body from pathogens. Correct scientific terminology must be used and sources must be referenced.

Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria, you must show that you are able to:
D.D4	Evaluate the roles of the cell-mediated and humoral responses to pathogens.
D.M4	Compare the roles of the specific and non-specific defence mechanisms in the human body.
D.P5	Explain the components of the specific and the non-specific defences, in protecting the body.
Sources of information to support you with this Assignment	https://kidshealth.org/en/teens/immune.html https://www.biointeractive.org/classroom-resources/cells-immune-system https://www.ncbi.nlm.nih.gov/books/NBK10752/ https://www.healio.com/hematology-oncology/learn-immuno-oncology/the-immune-system/the-innate-vs-adaptive-immune-response
Other assessment materials attached to this Assignment Brief	e.g. work sheets, risk assessments, case study